



# BHP's inaugural Water Report

John Mogford, Non-executive Director, BHP

Erika Korosi, Water Stewardship Team, BHP

London, 7 September 2018



# Welcome and introductions

Inaugural Water Report  
7 September 2018

FAM

2

**BHP**

# Purpose and agenda

**Water is vital to the livelihood of communities, the health of the environment and the sustainability of our business. Without access to water, our business simply could not operate.**

## Purpose

Provide the context to and highlights of BHP's inaugural Water Report.

## Agenda

1. BHP's water stewardship journey.
2. Overview of 2018 Water Report.
3. Open discussion and feedback.



# We recognise the shared, varied and changing nature of water-related risks

- Water is a critical enabler for BHP, a shared resource, a basic human right and key to ecosystem function.
- Access to and sustainability of water is under increasing pressure.
- The long-life of our Assets means we are place-bound and have a long-term interest in the sustainability of shared water resources.
- While water stewardship is not new for us, we know we can do more.

Copper



Scarcity

Iron Ore



Excess

Coal



Variability

Closed Mines

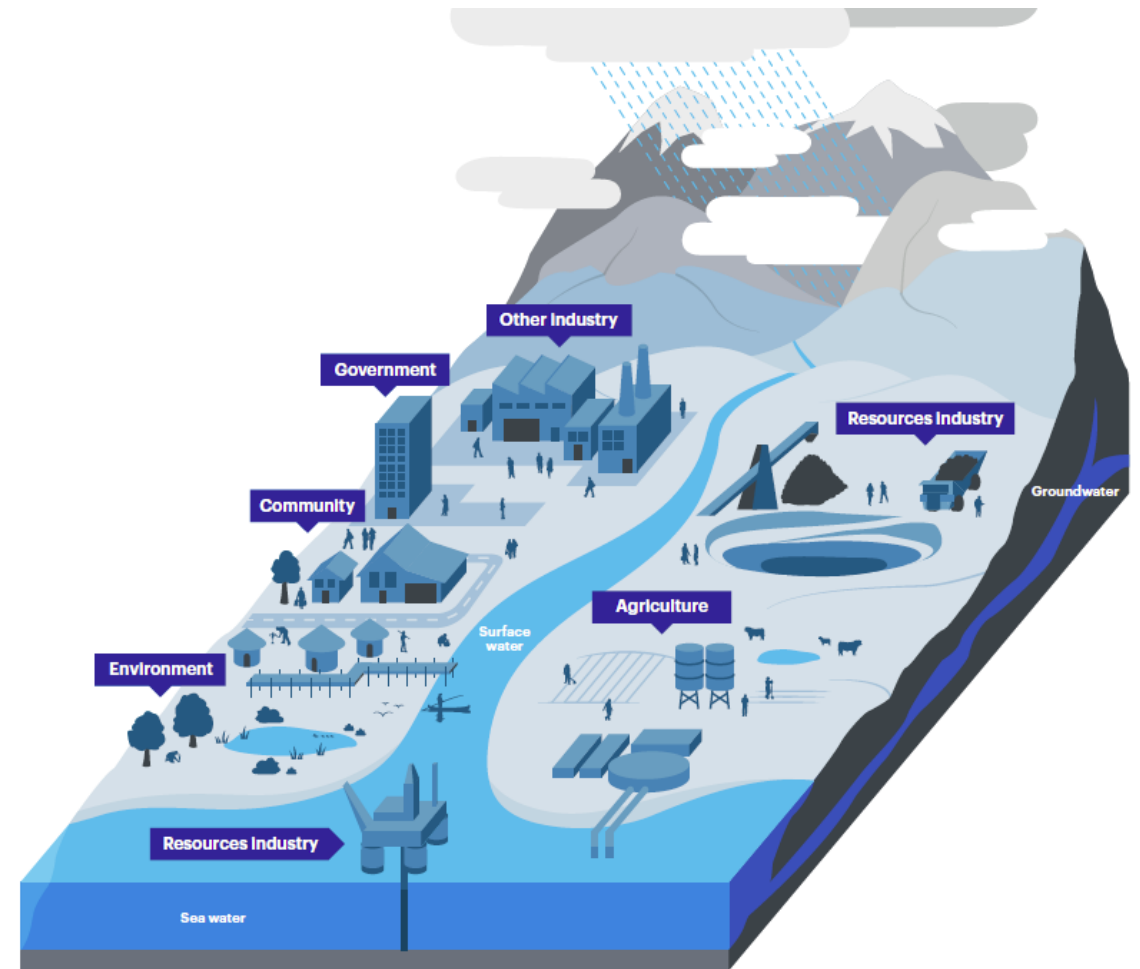


Legacy

# The shared nature of water

Water is a vital shared resource. It is essential to life and plays a spiritual, cultural, recreational, ecological and economic role in every landscape.

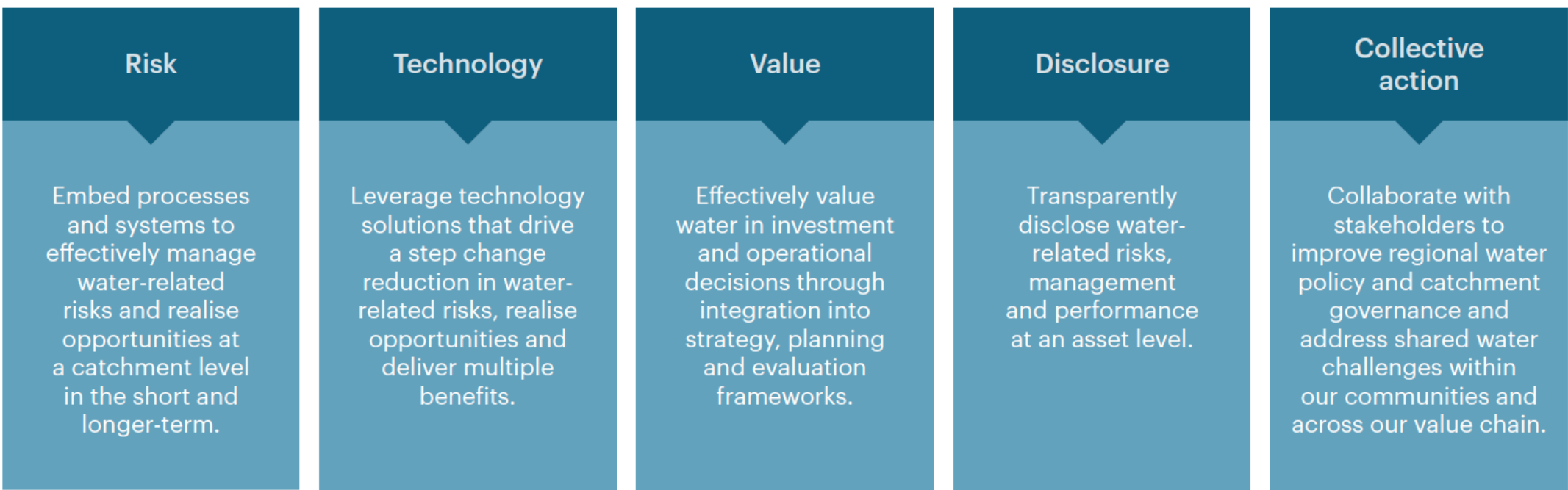
This requires collaboration within a catchment between communities, government, business and civil society to responsibly meet water needs today while also safeguarding water supplies for future generations.



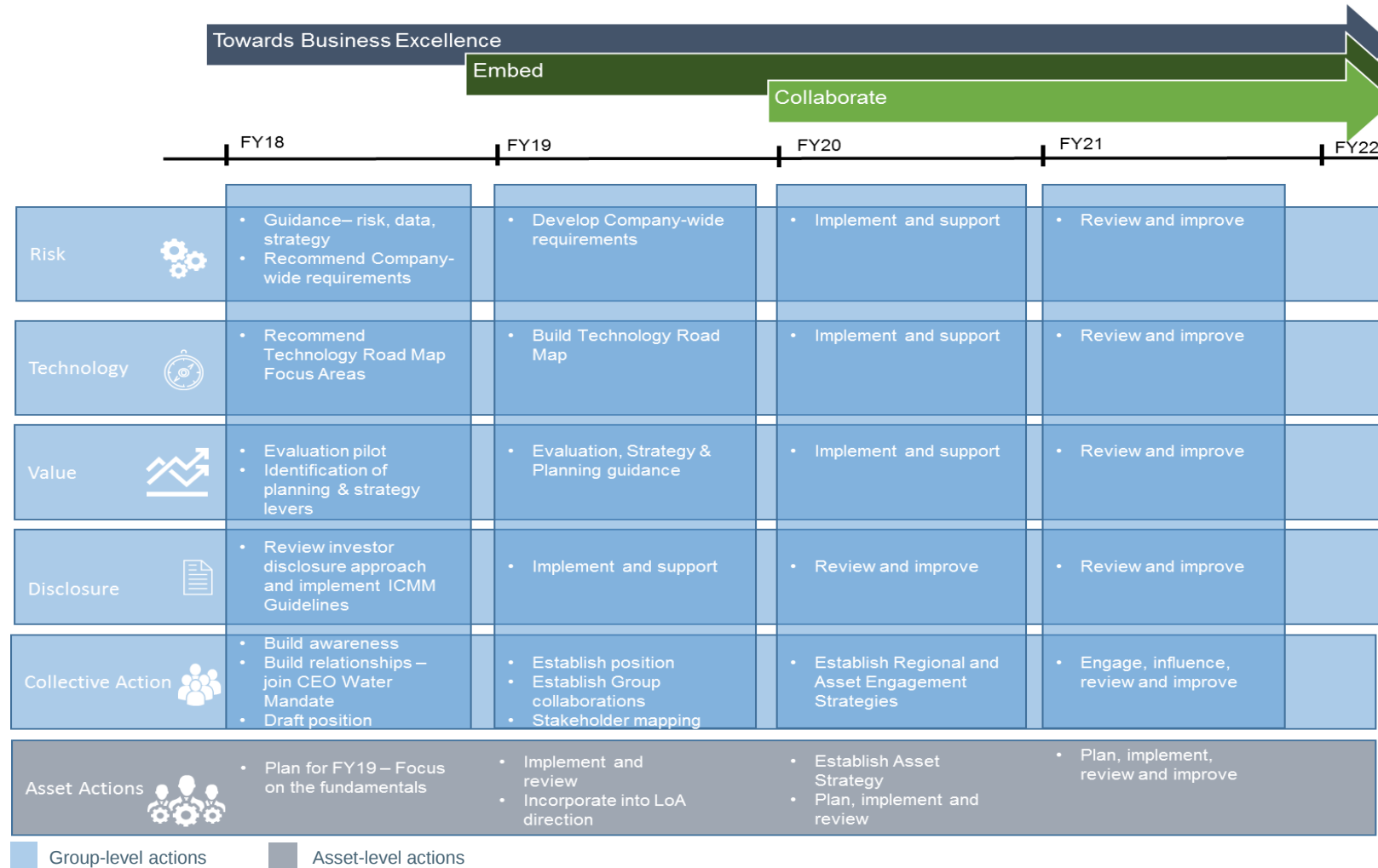
# Our water stewardship strategy

We can create long-term shareholder value only if we safeguard the sustainability of our operations with the support of our host communities. This perspective has informed our water stewardship strategy, so we can improve our management of water, increase transparency and contribute to the resolution of shared water challenges.

## The five pillars of our water stewardship strategy



# Water stewardship road map



# The role of disclosure

**Transparency builds understanding and accountability for our water performance.**

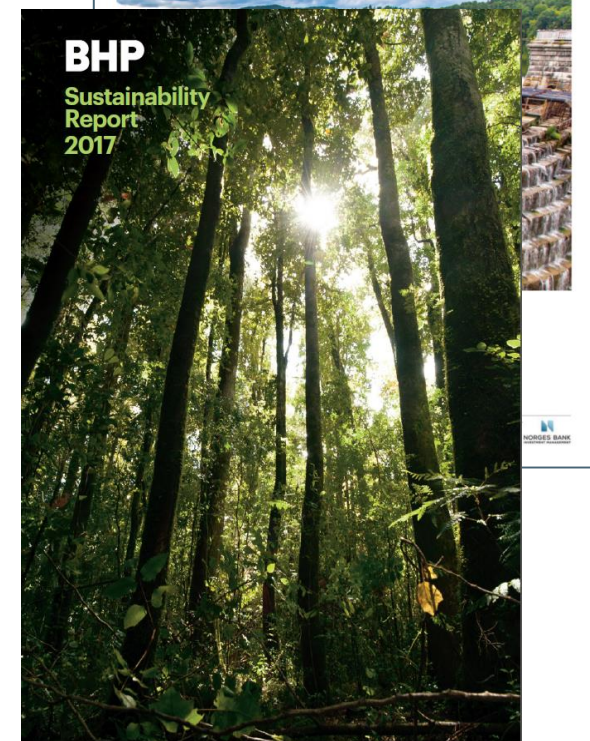
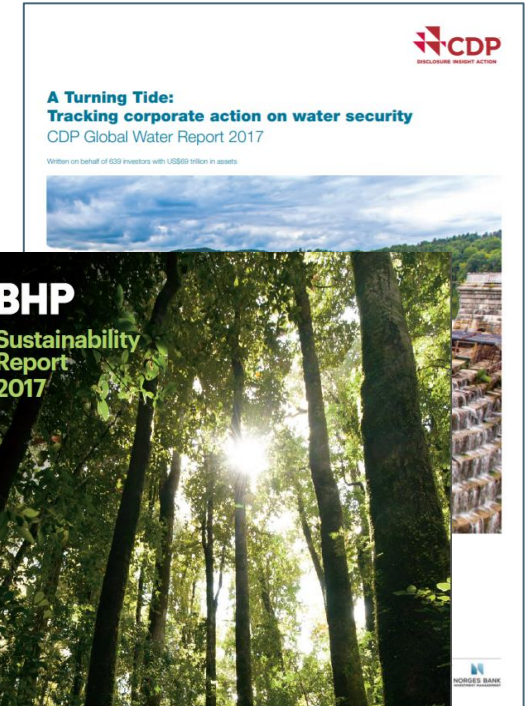
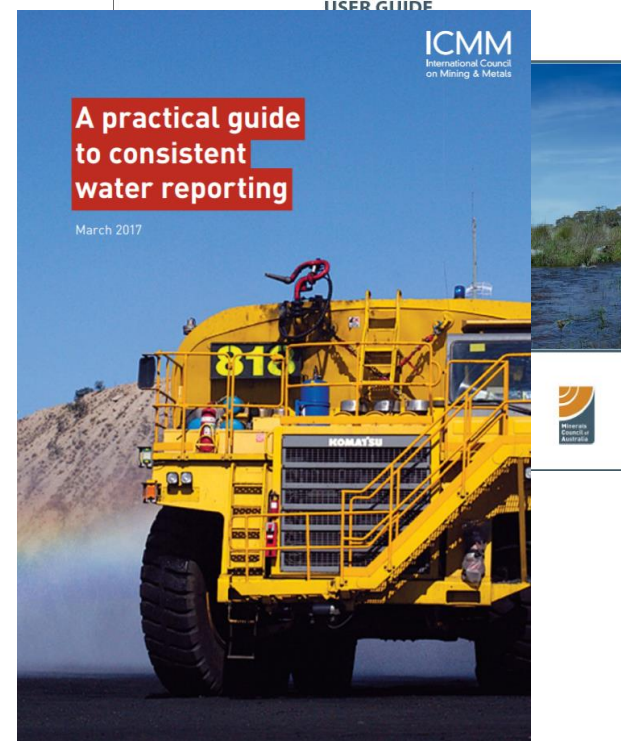
Comparable disclosure of water data, risks and performance by all key users is fundamental to effective water resource governance and sustainability.

# Disclosure – where we are coming from

**BHP has been using sector specific water accounting standards and reporting water performance publically for a number of years:**

- Historically our annual Sustainability Report has been the main platform for disclosure of Company-level water-related risk and performance.
- We have participated in the Carbon Disclosure Program (CDP) Water disclosures since its inception in 2009.
- We have applied the Minerals Council of Australia Water Accounting Framework since it was developed in 2005 and are in the process of implementing the International Council on Mining and Metals (ICMM) Water Reporting Guidelines published in 2017.
- We have had water specific public targets in place for over 15 years.

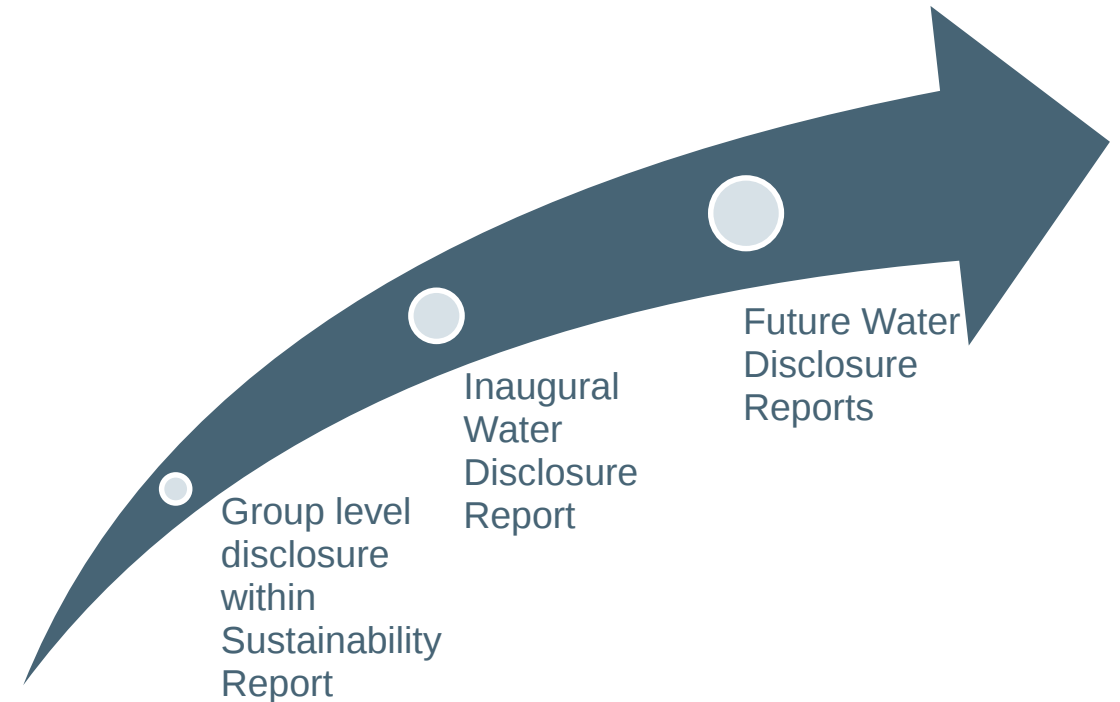
## Water Accounting Framework for the Minerals Industry



# Disclosure – where we want to go

**Effective disclosure requires a simple, transparent reporting of water interactions, performance and risk. This will be a journey both internally and externally.**

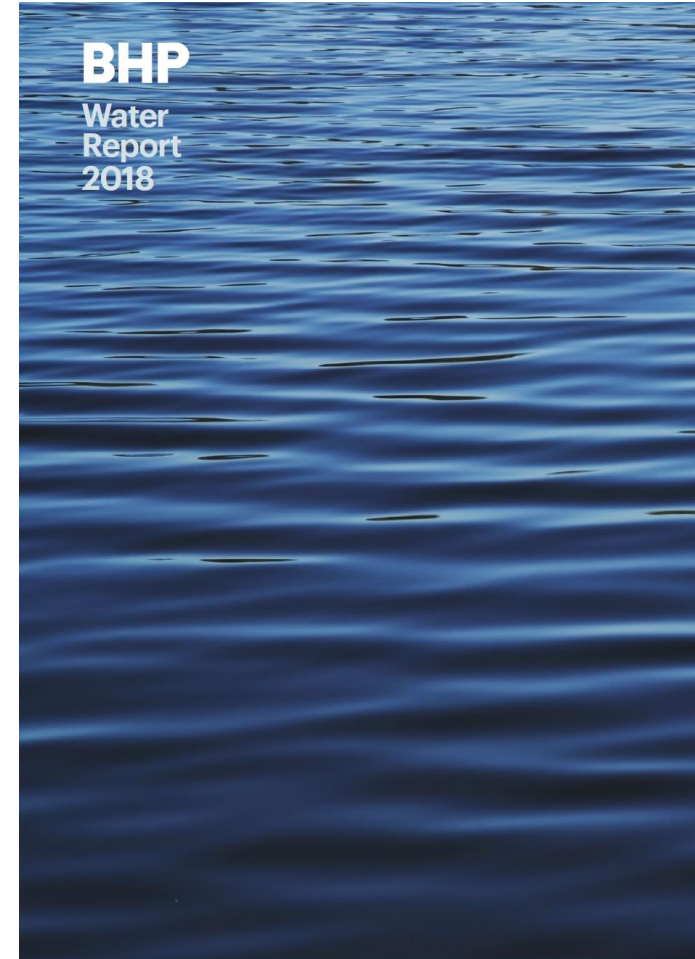
- Benchmarking and stakeholder engagement has highlighted that the future state for water disclosure is still in development.
- While questionnaires have evolved over recent years, they still do not readily provide stakeholders with sufficient contextual information and comparable data to understand a company's exposure and response to water-related risks
- Our benchmarking identified that effective disclosure requires a simple, transparent reporting of water interactions, performance and risk including:
  - Overarching understanding of approaches to water management, stewardship and human right to water;
  - Transparency of the operating context of Assets – physical and socio-political;
  - Understanding of regional water accounts and performance utilising a common language;
  - Disclosure of risks exposure, management and opportunities, with a particular focus on areas of water stress.



# BHP 2018 Water Report

This Water Report is our first step towards more accessible and transparent water reporting.

- It shows our interactions with water from extraction, use and discharge; and of our water-related performance and risks.
- The Report is based on the International Council on Mining and Metals 'A Practical Guide to Consistent Water Reporting' (ICMM Guidelines) - a minimum disclosure standard that aims to set a transparent benchmark for the mining and metals industry.
- The Report has also taken account of other disclosure frameworks.
  - The United Nations Global Compact's CEO Water Mandate (CEO Water Mandate).
  - The Global Reporting Initiative (GRI).
  - Carbon Disclosure Project (CDP) Water disclosure requirements.



# BHP's water sensitivity and risk assessments



# BHP's water sensitivity assessment\*

| Asset                                    | <br>Climate | <br>BHP water source interactions | <br>Competition for resources |                        |                        |                                    |                        |                                        |                                      | <br>Regulation | Catchment-level water sensitivity (BHP assessed) |                  |
|------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|------------------------------------|------------------------|----------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------|
|                                          | Climate zone <sup>8</sup>                                                                    | Cyclone prone                                                                                                       | Ground water                                                                                                     | Surface water          | Sea water              | Baseline water stress <sup>9</sup> | Stakeholder concern    | Shared water resource with communities | Proximity to high conservation areas | Potential for cumulative impacts                                                                  |                                                  | Water regulation |
| 1 BHP Billiton Mitsubishi Alliance (BMA) | Humid sub-tropical                                                                           | Yes                                                                                                                 | <div><div></div></div>                                                                                           | <div><div></div></div> | <div><div></div></div> | Arid and low water use             | <div><div></div></div> | <div><div></div></div>                 | <div><div></div></div>               | <div><div></div></div>                                                                            | <div><div></div></div>                           | Moderate         |
| 2 BHP Billiton Mitsui Coal (BMC)         | Humid sub-tropical                                                                           | Yes                                                                                                                 | <div><div></div></div>                                                                                           | <div><div></div></div> | <div><div></div></div> | Arid and low water use             | <div><div></div></div> | <div><div></div></div>                 | <div><div></div></div>               | <div><div></div></div>                                                                            | <div><div></div></div>                           | Moderate         |
| 3 Conventional Petroleum <sup>10</sup>   | Sub-tropical to tropical (off shore)                                                         | Yes                                                                                                                 | <div><div></div></div>                                                                                           | <div><div></div></div> | <div><div></div></div> | n/a to low                         | <div><div></div></div> | <div><div></div></div>                 | <div><div></div></div>               | <div><div></div></div>                                                                            | <div><div></div></div>                           | Low              |
| 4 Escondida                              | Cold desert                                                                                  | No                                                                                                                  | <div><div></div></div>                                                                                           | <div><div></div></div> | <div><div></div></div> | Arid and low water use             | <div><div></div></div> | <div><div></div></div>                 | <div><div></div></div>               | <div><div></div></div>                                                                            | <div><div></div></div>                           | High             |

● Low influence on water sensitivity
● Medium influence on water sensitivity
● High influence on water sensitivity
n/a Not applicable

\* For full list of assets and definitions of terminology used, refer to page 15 of the report.

# Our water-related risks by asset\*

| Asset                       |  Water security |  Water quality |  Water excess and/or dewatering |  WASH <sup>12</sup> |  Tailings |  Extreme weather |  Environment |  Compliance |  Closure |  Climate change |  Catchment-level risk |
|-----------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| BMA                         | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      | ✓                                                                                            | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| BMC                         | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      | ✓                                                                                            | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| Conventional Petroleum      |                                                                                                    |                                                                                                   |                                                                                                                    | ✓                                                                                                      |                                                                                              | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              |                                                                                             | ✓                                                                                                  |                                                                                                        |
| Escondida                   | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      | ✓                                                                                            | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| North American Closed Mines |                                                                                                    | ✓                                                                                                 |                                                                                                                    | ✓                                                                                                      | ✓                                                                                            | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| NSW Energy Coal             | ✓                                                                                                  | ✓                                                                                                 |                                                                                                                    | ✓                                                                                                      | ✓                                                                                            |                                                                                                     | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| Olympic Dam                 | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      | ✓                                                                                            |                                                                                                     | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| Pampa Norte                 | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      |                                                                                              | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |
| WAIO                        | ✓                                                                                                  | ✓                                                                                                 | ✓                                                                                                                  | ✓                                                                                                      | ✓                                                                                            | ✓                                                                                                   | ✓                                                                                               | ✓                                                                                              | ✓                                                                                           | ✓                                                                                                  | ✓                                                                                                      |

\* For full list of assets and definitions of terminology used, refer to page 16 of the report.

# Risk management – case studies



# Water and our governance processes



The Board's Sustainability Committee oversaw the development of our water stewardship strategy in FY2017 and will monitor its implementation and our water-related public targets and goals.

We have core business processes, requirements and guidance materials that apply to our management of water at Group and operational levels.

These include:

- Planning and strategy, and investment evaluation;
- *Our Requirements* standards;
- Tailings management;
- Target setting;
- Water accounting;
- Audit and assurance.

# Water and our governance processes – operational level controls\*

| Risk controls                   |  Catchment-level risk |  Climate change |  Closure |  Compliance |  Environment |  Extreme weather |  Tailings |  WASH <sup>30</sup> |  Water excess and/or dewatering |  Water quality |  Water security |
|---------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Reduced water use               | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      |                                                                                                                    | ✓                                                                                                 | ✓                                                                                                  |
| Water recycling and reuse       | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      | ✓                                                                                                                  | ✓                                                                                                 | ✓                                                                                                  |
| Water efficiency                | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      |                                                                                                                    | ✓                                                                                                 | ✓                                                                                                  |
| Enhanced water recovery         | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      | ✓                                                                                                                  | ✓                                                                                                 | ✓                                                                                                  |
| Water source substitution       | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            |                                                                                                        |                                                                                                                    | ✓                                                                                                 | ✓                                                                                                  |
| Water source segregation        | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      | ✓                                                                                                                  | ✓                                                                                                 | ✓                                                                                                  |
| Water storage management        | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      | ✓                                                                                                                  | ✓                                                                                                 | ✓                                                                                                  |
| Controlled discharge management | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            |                                                                                                        | ✓                                                                                                                  | ✓                                                                                                 |                                                                                                    |
| Water treatment                 | ✓                                                                                                       | ✓                                                                                                  | ✓                                                                                           | ✓                                                                                              | ✓                                                                                               | ✓                                                                                                   | ✓                                                                                            | ✓                                                                                                      | ✓                                                                                                                  | ✓                                                                                                 | ✓                                                                                                  |

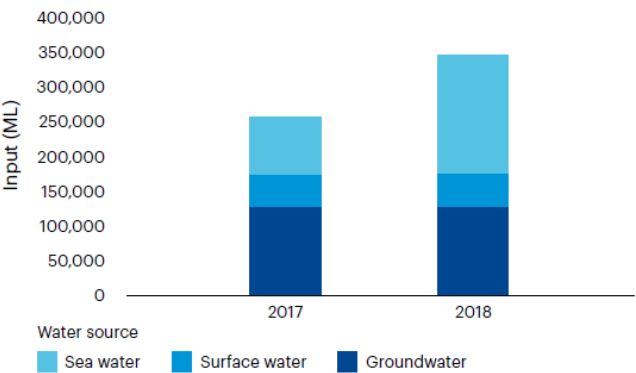
\* For full list of risk controls and definitions of terminology used, refer to page 43 of the report.

# BHP's Performance

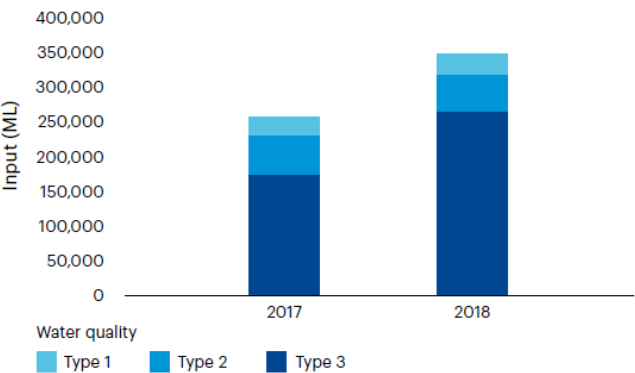
A scenic landscape photograph of a river flowing through a forested area. The river is surrounded by lush green trees and vegetation. Large, dark rocks are scattered throughout the riverbed and along the banks. The water is clear, reflecting the surrounding greenery and the sky. The overall scene is peaceful and natural.

# Performance – water inputs

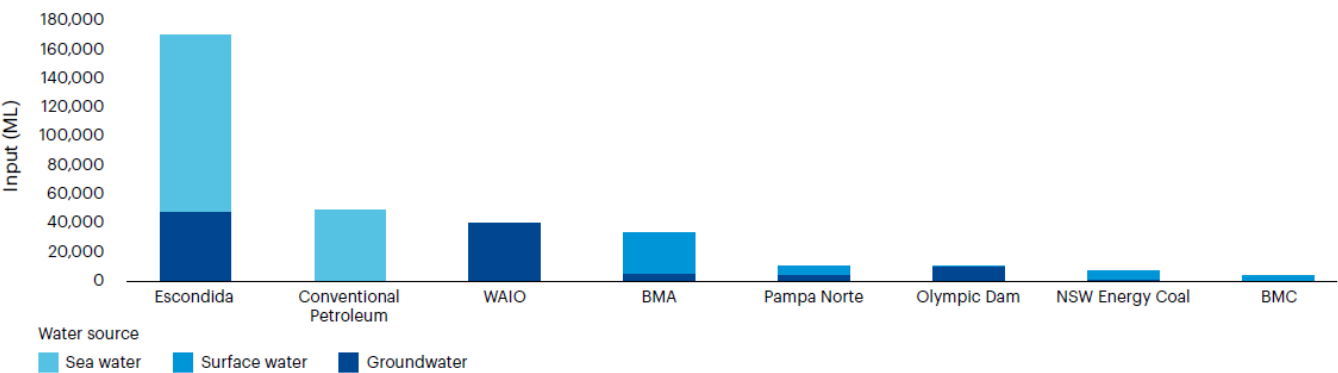
FY2017–FY2018 Total inputs (by source)



FY2017–FY2018 Total inputs (by quality)

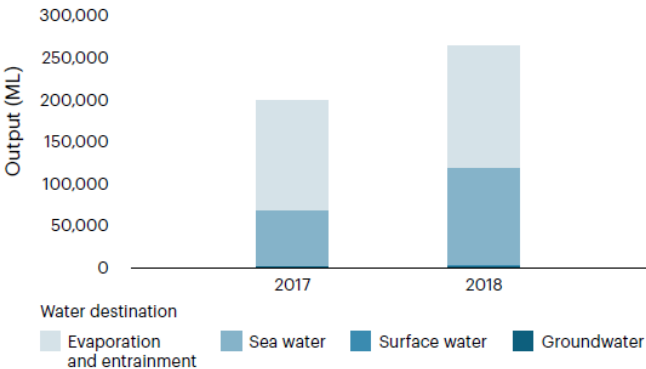


FY2018 Inputs by asset (by source)<sup>23</sup>

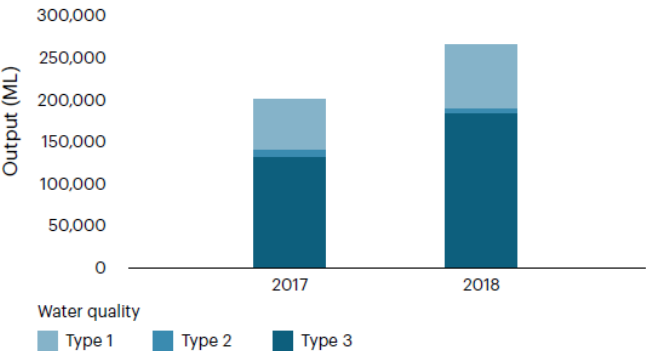


# Performance – water outputs

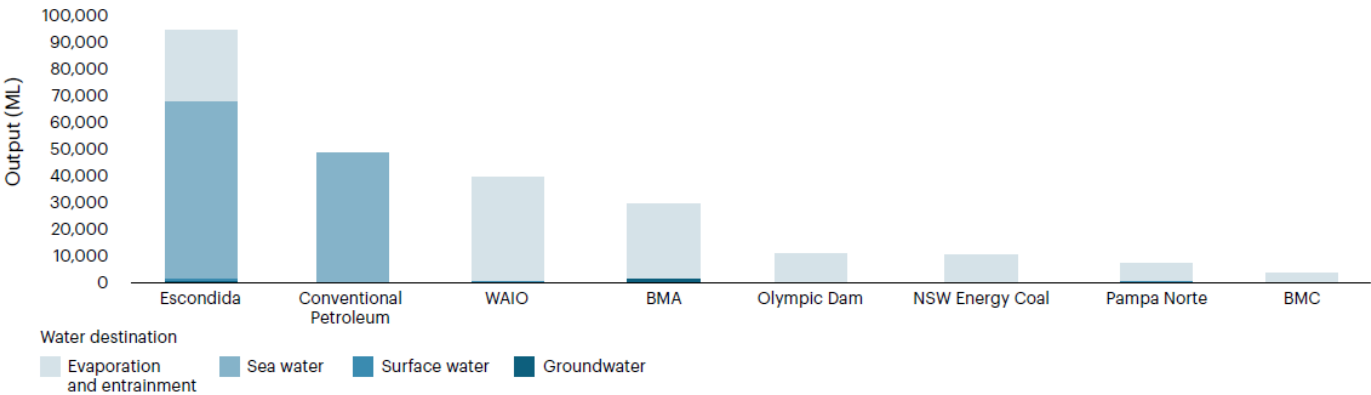
FY2017–FY2018 Total outputs (by destination)



FY2017–FY2018 Total outputs (by quality)



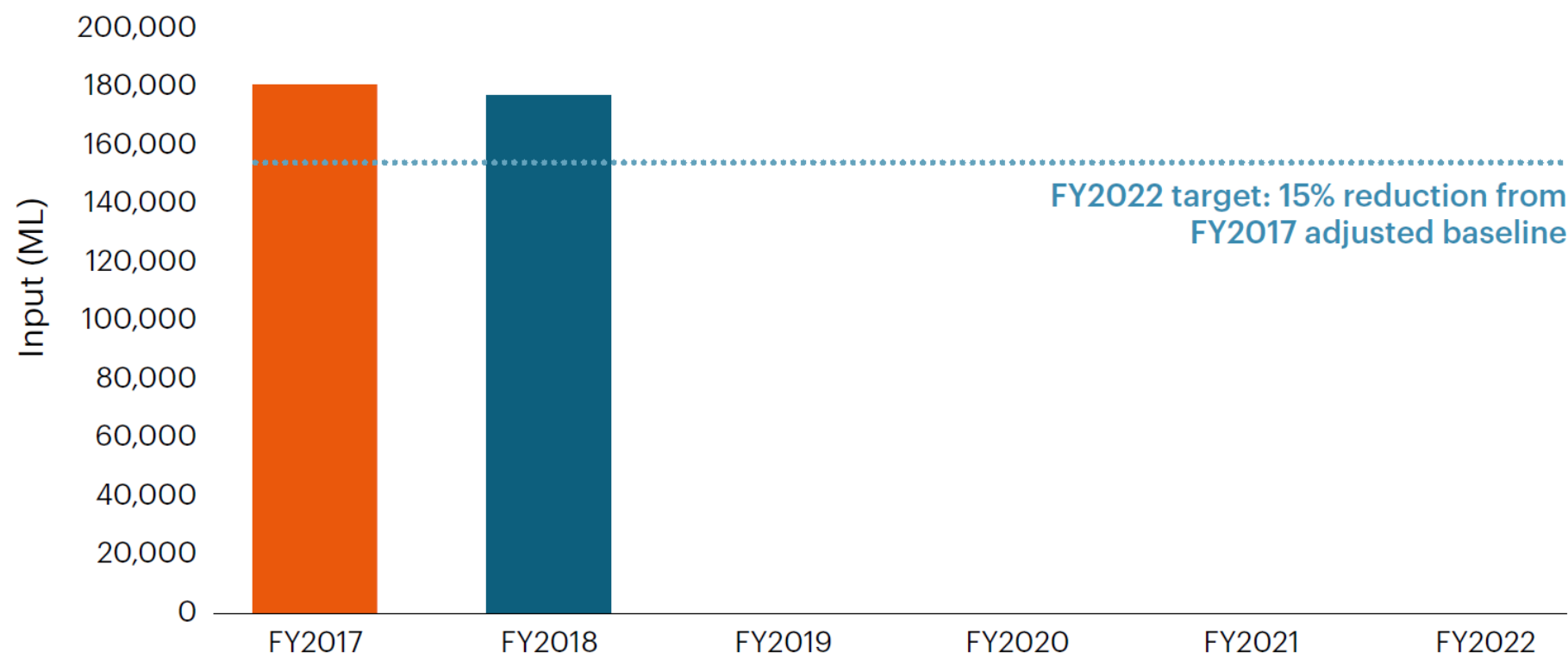
FY2018 Outputs by asset (by destination)<sup>25</sup>



# Performance – five year target

## Five year target

We achieved a two per cent reduction of fresh water withdrawal against our new five-year water target of reducing FY2022 fresh water withdrawal by 15 per cent from FY2017 levels.



# Performance – longer term goal

## Longer-term goal

Aligned with the United Nations Sustainable Development Goals (UN SDGs):

‘In line with United Nations Sustainable Development Goal (UN SDG) 6, BHP will collaborate to enable integrated water resource management in all catchments where we operate by FY2030.’

Initial steps made in FY2018:

- Undertook an assessment of water policies (government and regulatory) across the regions where we operate;
- Commenced a collaboration with the UN CEO Water Mandate to support harmonisation of water accounting. A critical step towards enhancing transparency and collaboration across all sectors for improved water governance.



WaterGuide's Six Key Elements

# Questions and comments



# Summary FY18 performance data

## Summary FY2018 water performance data (total and by region)<sup>18</sup>

|                                                           | Total          | Western Australia <sup>19</sup> | Eastern Australia <sup>20</sup> | Chile <sup>21</sup> | Northern America <sup>22</sup> |
|-----------------------------------------------------------|----------------|---------------------------------|---------------------------------|---------------------|--------------------------------|
| <b>Inputs (megalitres)</b>                                | <b>345,710</b> | 75,140                          | 54,390                          | 179,780             | 36,400                         |
| Water input by quality – Type 1                           | 28,940         | 18,210                          | 7,930                           | 0                   | 2,810                          |
| Water input by quality – Type 2                           | 52,700         | 15,200                          | 34,200                          | 0                   | 3,300                          |
| Water input by quality – Type 3                           | 264,070        | 41,730                          | 12,260                          | 179,780             | 30,290                         |
| Water input by source – Surface water                     | 48,590         | 1,450                           | 37,020                          | 6,270               | 3,850                          |
| Water input by source – Groundwater                       | 127,870        | 55,080                          | 17,370                          | 52,730              | 2,690                          |
| Water input by source – Sea water                         | 169,250        | 18,610                          | 0                               | 120,780             | 29,860                         |
| <b>Outputs (megalitres)</b>                               | <b>263,860</b> | 73,290                          | 53,330                          | 100,970             | 36,260                         |
| Water output by quality – Type 1                          | 74,130         | 20,390                          | 21,450                          | 32,280              | 0                              |
| Water output by quality – Type 2                          | 6,730          | 4,580                           | 1,830                           | 0                   | 320                            |
| Water output by quality – Type 3                          | 183,000        | 48,320                          | 30,050                          | 68,690              | 35,940                         |
| Water output by destination – Surface water               | 1,850          | 410                             | 0                               | 1,120               | 320                            |
| Water output by destination – Groundwater                 | 2,020          | 0                               | 1,180                           | 830                 | 10                             |
| Water output by destination – Sea water                   | 114,940        | 18,620                          | 40                              | 66,410              | 29,870                         |
| Water output by destination – Evaporation and Entrainment | 144,730        | 53,950                          | 52,110                          | 32,610              | 6,060                          |
| Water output by destination – third party                 | 320            | 320                             | 0                               | 0                   | 0                              |
| <b>Recycled/Reused (megalitres)</b>                       | <b>265,720</b> | 21,620                          | 23,760                          | 220,250             | 90                             |

18. In some instances, the sum of regional input and output totals for quality, source and/or destination may differ due to rounding.

19. Includes WAIO, Nickel West and Conventional Petroleum (Australian operations).

20. Includes Olympic Dam, BMA, BMC and NSW Energy Coal.

21. Includes Pampa Norte and Escondida.

22. Includes Conventional Petroleum (Northern American operations), Jansen Potash and North American Closed Mines.

**BHP**